

IN THE CLAIMS:

The following is a complete listing of claims in this application.

Claims 1-23 (canceled).

24. (previously presented) A method for producing a self-supporting fiber composite grid component having at least one intersection or node point, comprising the steps of:

obtaining an integral fiber preform by tailored fiber placement using continuous fibers laid and stitched to obtain a desired geometry having at least one intersection or node point, and having a substantially constant material thickness and substantially constant fiber volume content at the at least one intersection or node point and adjoining portions of the preform,

placing the preform in a mold having voids for receiving the preform defined by flexible elements which follow shrinkage of the preform, the mold substantially predetermining the component in final geometry,

providing the fiber preform having a substantially constant material thickness and substantially constant fiber volume content, before or after being placed in the mold, with a monomer or polymer, and

curing the monomer or polymer with the preform in the mold to form a blank having at least one intersection or node point, and substantially constant material thickness and substantially constant fiber volume content at the at least one intersection or node point and adjoining portions of the blank.

25. (previously presented) The method of claim 24, additionally comprising pyrolyzing the blank.

26. (previously presented) The method of claim 24, wherein the providing step comprises impregnating or

saturating with a resin and/or provided with at least one polymer fiber as a matrix, and wherein the curing comprises subjecting to a heat process for hardening.

27. (previously presented) The method of claim 24, wherein the fiber preform is provided with the monomer before being placed in the mold and is subjected to the heat process in the mold.

28. (previously presented) The method of claim 25, wherein the curing step comprises disposing the preform between a lower die and an upper die of a pressing tool in the mold, one of the dies having mold voids which are defined by flexible elements and which predetermine the final circumferential geometry of the blank.

29. (previously presented) The method of claim 28, additionally comprising, for removing the blank from the mold voids, deforming the flexible elements.

30. (previously presented) The method of claim 24, wherein the preform comprises reinforcing fibers.

31. (previously presented) The method of claim 30, wherein the reinforcing fibers comprise roving strands and/or fibers comprising natural, aramide, carbon and/or ceramic fibers.

32. (previously presented) The method of claim 25, wherein the monomer or polymer is a phenol-derived resin.

Claim 33 (canceled).

34. (previously presented) The method of claim 25, wherein the pyrolyzing comprises carbonizing the blank at a temperature T_1 where $500^{\circ}\text{C} \leq T_1 \leq 1450^{\circ}\text{C}$.

35. (previously presented) The method of claim 34, wherein $900^{\circ}\text{C} \leq T_1 \leq 1200^{\circ}\text{C}$.

36. (previously presented) The method of claim 25, wherein the pyrolyzing comprises graphitizing the blank at a temperature T_2 where $1500^{\circ}\text{C} < T_2 \leq 3000^{\circ}\text{C}$.

37. (previously presented) The method of claim 36, wherein $1800^{\circ}\text{C} \leq T_2 \leq 2500^{\circ}\text{C}$.

38. (previously presented) The method of claim 30, wherein the reinforcing fibers comprise endless fibers.

39. (previously presented) The method of claim 30, wherein the reinforcing fibers comprise co-woven fibers, site-woven fibers, commingled fibers, intermingled fibers, demixed staple fiber yarns, or respool-spun fibers.

40. (previously presented) The method of claim 39, wherein polymer fibers as matrices are added to the reinforcing fibers.

Claims 41-42 (canceled).

43. (previously presented) The method of claim 24, wherein the component is an integral grid of a height that remains constant as a component.

44. (previously presented) The method of claim 24, wherein the component is of fiber reinforced carbon.

Claim 45 (canceled).

46. (previously presented) The method of claim 45, wherein a blank comprising fiber reinforced plastic material is carbonized and/or graphitized.

Claim 47 (canceled).

48. (new) A method for producing a self-supporting fiber composite grid component having at least one intersection or node point, comprising the steps of:

obtaining an integral fiber preform by tailored fiber placement using continuous fibers laid and stitched to obtain a desired geometry having at least one intersection or node point,

placing the preform in a mold having voids for receiving the preform defined by flexible elements which follow shrinkage of the preform, the mold substantially predetermining the component in final geometry,

providing the fiber preform before or after being placed in the mold, with a monomer or polymer, and

curing the monomer or polymer with the preform in the mold to form a blank having at least one intersection or node point.

49. (new) The method of claim 48, additionally comprising pyrolyzing the blank.

50. (new) The method of claim 48, wherein the providing step comprises impregnating or saturating with a resin and/or provided with at least one polymer fiber as a matrix, and wherein the curing comprises subjecting to a heat process for hardening.

51. (new) The method of claim 50, wherein the fiber preform is provided with the monomer before being placed in the mold and is subjected to the heat process in the mold.

52. (new) A self-supporting fiber composite grid component having at least one intersection or node point, comprising:

an integral fiber preform by tailored fiber placement using continuous fibers laid and stitched to obtain a desired geometry having at least one intersection or node point, and having a substantially constant material thickness and substantially constant fiber volume content at the at least one intersection or node point and adjoining portions of the preform,

the integral fiber preform being impregnated with a cured monomer or polymer to form the grid component having at least one intersection or node point, with substantially

constant material thickness and substantially constant fiber volume content at the at least one intersection or node point and adjoining portions of the blank.

53. (new) The grid component of claim 52, wherein the cured monomer or polymer is pyrolyzed.

54. (new) The grid component of claim 52, wherein the preform comprises reinforcing fibers.

55. (new) The grid component of claim 52, wherein the reinforcing fibers comprise roving strands and/or fibers comprising natural, aramide, carbon and/or ceramic fibers.

56. (new) The grid component of claim 52, wherein the monomer or polymer is a phenol-derived resin.

57. (new) The grid component of claim 52, wherein the reinforcing fibers comprise endless fibers.

58. (new) The grid component of claim 52, wherein the reinforcing fibers comprise co-woven fibers, site-woven fibers, commingled fibers, intermingled fibers, demixed staple fiber yarns, or respool- spun fibers.

59. (new) The grid component of claim 52, wherein polymer fibers as matrices are added to the reinforcing fibers.